

Iowa Department of Administrative Services – Human Resources Enterprise
Job Classification Description

Transportation Engineer Manager

Definition

Supervises a major section of a specialized transportation engineering program; manages and supervises a resident construction engineering office; performs related work as required.

The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

Work Examples

Supervises and evaluates the work of subordinates; recommends personnel actions related to selection, disciplinary procedures, performance, leaves, grievances, work schedules, and assignments; administers personnel policies and procedures.

Oversees and administers highway and structure construction; ensures compliance with contracts and project concepts and seeks to discover errors/omissions and resolve problems and issues; develops and recommends changes to contracts and approval of subcontract requests and Certificates of Completion/Final Acceptance.

Evaluates roadways, bridges, highway/railroad grade crossings, sign trusses, high mast lighting towers, traffic safety devices, and rights of way; identifies maintenance, repair, and operational needs; utilizes pavement management information systems to develop and recommend maintenance and rehabilitation strategies.

Conducts biennial bridge inspections, identifying maintenance/repair needs and providing information for the bridge maintenance system (PONTIS); performs initial inspection of bridge damage, conducting structural and inventory analysis; determines safety of continued use.

Provides consultation for internal and external customers in technical areas assigned; assists staff in timely solutions to construction and maintenance problems; conducts project site visits to evaluate contract compliance, contractor work quality, traffic control, and related transportation areas.

Performs technical and administrative work in the supervision and management of a major section in the development of methods manuals; production of technical detail plans; conduct of geotechnical investigations analysis and design; the testing, documentation, and assessment or acceptance of pavement and manufactured products; the management and direction of private consultants providing design services, the acquisition and preparation of survey and photogrammetric information, or the development of design plans for interstate and primary roadway improvements statewide.

Responds to inquiries and resolves complaints on technical issues and department policies and regulations with internal staff, governmental agencies, private entities, legislators, news media, and the general public; participates in public hearings, zoning meetings, City Council meetings, and County Board of Supervisor meetings to monitor and resolve issues having potential impact on the primary road system and explain the department's position.

Applies engineering knowledge in technical transportation areas such as evaluating the impact of new technology and regulations or contractor proposals/requests to substitute equipment, method or

material, approving access (entrance) requests, and issuing utility permits; presents technical material at conferences and seminars.

Participates in the study and projection of present and future transportation needs and helps formulate alternative policies and means of meeting these needs through appropriate/available resources; develops single or alternative plans, policies, programs, and recommendations based upon costs, benefits, and overall feasibility; evaluates program progress to assure that plan objectives are realized in implementing the plans.

Competencies Required

Knowledge:

- Engineering and Technology – Practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Design – Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- Administration and Management – Business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Transportation – Principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- Building and Construction – Materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Mathematics – Arithmetic, algebra, geometry, calculus, statistics, and applications.
- Customer Service – Principles and processes for providing customer services, including customer needs assessment, meeting quality standards for services, and evaluating customer satisfaction.
- Personnel and Human Resources – Principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

Abilities:

- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Information Ordering – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Written Comprehension – Read and understand information and ideas presented in writing.
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.

Skills:

- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- Speaking – Talking to others to convey information effectively.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Operations Analysis – Analyzing needs and product requirements to create a design.
- Reading Comprehension – Understanding written sentences and paragraphs in work-related documents.
- Coordination – Adjusting actions in relation to others' actions.
- Mathematics – Using mathematics to solve problems.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Monitoring – Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Management of Personnel Resources – Motivating, developing, and directing people as they work, identifying the best people for the job.
- Management of Material Resources – Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) All of the following (a and b):
 - a. Licensure as a professional engineer; and
 - b. Three years of full-time professional work experience in transportation engineering or civil engineering, one year of which must have included project management or lead work responsibilities.
- 2) All of the following (a, b, and c):
 - a. Licensure as a professional engineer; and
 - b. Two years of full-time professional work experience in transportation engineering or civil engineering, one year of which must have included project management or lead work responsibilities; and
 - c. Graduation from an accredited college or university with a master's degree in chemical, civil, construction, environmental, materials, structural, or transportation engineering; engineering management; or a field closely related to transportation engineering.
- 3) Current, continuous experience in the state executive branch that includes two years of full-time work as a Transportation Engineer.

Notes

Prior to appointment, applicants must possess active licensure as a professional engineer by the Iowa Engineering & Land Surveying Examining Board.

Effective date: 09/20 SA